

IN THE CLAIMS

Please amend the claims as follows:

sub 7  
c1  
1. (Amended) A transgenic plant cell which is genetically modified, the genetic modification leading to a decrease in the activity of one or more granule-bound starch synthase I (GBSSI) proteins occurring endogenously in the plant cell and to a decrease in the activity of one or more branching enzyme (BE) proteins occurring endogenously in the plant cell, in comparison to corresponding non genetically modified plant cells of wild-type plants.

2. (Amended) The transgenic plant cell as claimed in claim 1, the genetic modification comprising the introduction of one or more foreign nucleic acid molecules, wherein the presence and/or expression of the one or more nucleic acid molecules leads to a decrease in the activity of at least one GBSSI protein and at least one BE protein, in comparison to corresponding non genetically modified plant cells of wild-type plants.

B  
3. (Amended) The transgenic plant cell as claimed in claim 1, wherein the presence and/or the expression of one or more foreign nucleic acid molecules leads to the inhibition of the expression of endogenous genes which encode at least one GBSSI protein and at least one BE protein.

4. (Amended) The transgenic plant cell as claimed in claim 2, in which said foreign nucleic acid molecules are selected from the group consisting of

- a) DNA molecules which encode at least one antisense RNA which brings about a decrease in the expression of endogenous genes encoding GBSSI and/or BE proteins;
- b) DNA molecules which lead, via a cosuppression effect, to a decrease in the expression of endogenous genes encoding GBSSI and/or BE proteins;
- c) DNA molecules which encode at least one ribozyme which specifically cleaves transcripts of endogenous genes encoding GBSSI and/or BE proteins; and
- d) nucleic acid molecules, introduced by means of in-vivo mutagenesis, which lead to a mutation or insertion of a heterologous sequence in endogenous genes encoding GBSSI and/or BE protein, the mutation or insertion bringing about a decrease in the expression of GBSSI and/or BE genes or the synthesis of inactive GBSSI and/or BE proteins.

547  
C3

8. (Amended) A process for the production of a transgenic plant cell which synthesizes a modified starch, in which a plant cell is genetically modified by the introduction of one or more foreign nucleic acid molecules, wherein the presence and/or expression of the one or more foreign nucleic acid molecules leads to a decrease in the activity of at least one GBSSI protein and to a decrease in the activity of at least one BE protein.

B2

9. (Amended) A process for the production of a transgenic plant cell whose starch has an amylopectin content of at least 90% and an increased phosphate content in comparison to starch from corresponding plants of the waxy phenotype, in which a plant cell is genetically modified by the introduction of one or more foreign nucleic acid molecules, wherein the presence and/or expression of the one or more foreign nucleic acid molecules leads to a decrease in the activity of at least one GBSSI protein and to a decrease in the activity of at least one BE protein.

10. (Amended) A process for the production of a transgenic plant which synthesizes a modified starch, in which

- a) a plant cell is genetically modified by the introduction of one or more foreign nucleic acid molecules wherein the presence and/or expression of the one or more foreign nucleic acid molecules leads to a decrease in the activity of at least one GBSSI protein and to a decrease in the activity of at least one BE protein;
- b) a plant is regenerated from the cell produced according to step a); and,
- c) if appropriate, further plants are produced from the plants produced according to step b).

11. (Amended) A process for the production of a transgenic plant whose starch has an amylopectin content of at least 90% and an increased phosphate content in comparison to starch from corresponding plants of the waxy phenotype, in which

- a) a plant cell is genetically modified by the introduction of one or more foreign nucleic acid molecules, wherein the presence and/or expression of the one or more foreign nucleic acid molecules leads to a decrease in the activity of at least one GBSSI protein and to a decrease in the activity of at least one BE protein;
- b) a plant is regenerated from the cell produced according to step a); and,

B<sup>2</sup>  
c) if appropriate, further plants are produced from the plants produced according to step b).

B<sup>3</sup> sub 657  
15. (Amended) Reproductive material of a plant as claimed in claim 12, containing plant cells as claimed in claim 1.

B<sup>4</sup> sub 657  
19. (Amended) A composition containing at least one of the nucleic acid molecules as defined in any one of claims 2 to 5 or 30 to 32, which is suitable for the production of transgenic plant cells as claimed in claim 1.

B<sup>5</sup> sub 657  
29. (Amended) A process for the production of a starch from a transgenic plant, plant cell, or plant reproductive material, wherein the transgenic plant, plant cell or plant reproductive material comprises genetic modification leading to a decrease in the activity of one or more GBSSI proteins occurring endogenously in the transgenic plant, plant cell or plant reproductive material and to a decrease in the activity of one or more BE proteins occurring endogenously in the transgenic plant, plant cell or plant reproductive material, in comparison to corresponding non genetically modified, wild-type plants, plant cells or plant reproductive material, comprising extracting the starch from the plant, plant cell or plant reproductive material.

Please add the following claims:

B<sup>6</sup>  
30. (New) A process for the production of a transgenic plant or plant cell, wherein the transgenic plant or plant cell comprises genetic modification leading to a decrease in the activity of one or more GBSSI proteins occurring endogenously in the transgenic plant or plant cell, and to a decrease in the activity of one or more BE proteins occurring endogenously in the transgenic plant or plant cell, in comparison to corresponding non genetically modified, wild-type plants or plant cells comprising introducing one or more foreign nucleic acid molecules, wherein the one or more foreign nucleic acid molecules encode at least one protein having enzymatic activity of GBSSI protein or a fragment thereof and at least one protein having enzymatic activity of BE protein or a fragment thereof into a plant or plant cell.

sub 657  
31. (New) The process of claim 30, wherein the transgenic plant synthesizes a modified starch having an increased phosphate content and/or a decreased gelatinization temperature, in comparison with starch from corresponding plants of the waxy phenotype.

32. (New) The process of claim 31, wherein the transgenic plant synthesizes a starch having an amylopectin content of at least 90%, and wherein the foreign nucleic acid molecule is selected from the group consisting of:

- B6
- a) DNA molecules which encode at least one antisense RNA which can bring about a decrease in the expression of endogenous genes encoding GBSSI and/or BEI proteins;
  - b) DNA molecules which lead, via a cosuppression effect, to a decrease in the expression of endogenous genes encoding GBSSI and/or BEI proteins;
  - c) DNA molecules which encode at least one ribozyme which specifically cleaves transcripts of endogenous genes encoding GBSSI and/or BEI proteins; and
  - d) nucleic acid molecules introduced by means of in-vivo mutagenesis, which lead to mutations or insertions of heterologous sequences in endogenous genes encoding GBSSI and/or BEI proteins, the mutation or insertion bringing about a decrease in the expression of the GBSSI and/or BEI genes or the synthesis of inactive GBSSI and/or inactive BEI proteins.

---

Please cancel claims 16-18 without prejudice.